

AMENDMENT OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.(Currently Amended) A method for an intermediary selectively coupling an external network and an internal network to dynamically generate filter rules to facilitate establishing an end to end secure session connection between a first device on the internal network and a second device of the external network, the method comprising:

receiving a secure session establishment request by the second device on the external network to establish a secure communication session with the first device on the internal network;

forwarding the secure session establishment request to the first device;

monitoring the internal network ~~for to detect~~ an approval or disapproval acknowledgement by the first device for the secure session establishment request; and

~~if an approval authentication acknowledgement is monitored, then configuring a first filter rule of the intermediary to allow communication between the first and second devices through the intermediary;~~ ~~if an approval authentication acknowledgement is detected;~~

~~receiving network traffic from the second device corresponding to a previous secure communication session established when the second device was previously on the internal network; and~~

~~responding to said network traffic with an error such that the second device attempts to re-establish a secure communication session from the external network.~~

2. (Original) The method of claim 1, further comprising:

determining a presence advertisement for the first device has been received before forwarding the secure session establishment request to the first device.

3. (Original) The method of claim 2 wherein the presence advertisement is delivered in accordance with the UPnP Simple Service Discovery Protocol (SSDP).

4. (Original) The method of claim 1, further comprising:
 - receiving network traffic from the second device corresponding to the second device requesting a UPnP Device Description Document from the first device.
5. (Original) The method of claim 1, further comprising:
 - receiving a service request from the second device for the first device, the service request having an associated communication port for performing the service;
 - determining the service request identifies a service advertised by the first device in a device description document; and
 - configuring a second filter rule to allow communication between the first device and the second device using the associated communication port.
6. (Original) The method of claim 1, further comprising:
 - providing the second device with an indicia for use by the second device in establishing a communication link to the first device.
7. (Original) The method of claim 6, wherein the indicia is a selected one of a globally routable Internet Protocol (IP) address, or an internal network address non-routable on the external network.
8. (Original) The method of claim 1, wherein communication within the internal network is in accord with an IPv6 compatible Internet Protocol (IP).
9. (Original) The method of claim 1, further comprising:
 - retrieving an Access Control List (ACL) from the first device, the ACL including an identification of devices authorized to establish communication sessions; and
 - determining based at least in part on the ACL the second device is authorized to establish the secure communication session with the first device before forwarding the secure session establishment request to the first device.
10. (Cancelled)

11. (Original) The method of claim 1, further comprising:

establishing the end to end secure session connection between the first device on the internal network and the second device of the external network in a single end to end secure session connection between said first and second devices.

12. (Currently Amended) A method for a second device communicating with a first device on an internal network by way of an intermediary selectively coupling an external network and an the internal network, comprising:

receiving, by the second device while on the internal network, a presence advertisement for the first device;

storing, by the second device while on the internal network, a network address associated with the first device;

determining, by the second device while on the internal network, services offered by the first device; and

issuing, by the second device while on the external network, issuing a secure communication initiation request to the first device via the intermediary.

13. (Currently Amended) The method of claim 12, wherein the intermediary is configured to:

forward the request to the first device;

monitor for an approval or disapproval authentication acknowledgement to the request; and

configure a filter of the intermediary to allow communication with the first device if an approval authentication acknowledgement is received.

14. (Currently Amended) The method of claim 13, wherein the intermediary is further configured to configure the filter to block communication with the first device if a disapproval authentication acknowledgement is received.

15. (Cancelled)

16. (Currently Amended) The method of claim 12, wherein while on the internal network, the method further comprising requesting, by the second device -while on the internal network, a description of services offered by the first device.

17. (Original) The method of claim 16, wherein the description of services is requested from the intermediary.

18. (Currently Amended) The method of claim 12, wherein while on the external network, the method further comprising requesting, by the second device while on the external network, a description of services offered by the first device.

19. (Original) The method of claim 18, wherein the description of services is requested from the intermediary.

20. (Currently Amended) The method of claim 12, further comprising:
receiving, by the second device while on the external network, an approval authentication acknowledgement to the request; and
responsive to the approval, requesting responsive to the approval, by the second device while on the external network, a service of the first device.

21. (Original) The method of claim 12, wherein the network address associated with the first device is a globally unique network address having an address portion identifying the intermediary.

22. (Currently Amended) The method of claim 12, wherein the second device is a traveling control point, performs the method for communicating with the device.

23. (Original) A system of devices communicatively coupled with an internal network and an external network via a gateway, comprising:

a first device, communicatively coupled to the internal network, offering services;

a second device selectively coupled with the internal and external networks, the second device seeking a service of the first device, wherein when requesting the service, said requesting includes sending a secure communication initiation request to the first device to facilitate establishing a secure communication session with the first device; and

an intermediary selectively communicatively coupling the first and second devices, wherein the intermediary is configured to receive a secure communication initiation request from the second device over the external network and forward the request to the first device.

24. (Original) The system of claim 23, wherein the intermediary is further configured to monitor the first device for an approval or disapproval authentication acknowledgement for the request, and to configure a filter of the intermediary controlling communication over the first network from the first device based at least in part on a monitored authentication acknowledgement.

25. (Original) The system of claim 23, wherein the first device communicates with the second device in accord with the UPnP Security Protocol.

26. (Original) The system of claim 23, wherein the secure communication initiation request corresponds to a UPnP Set Session Key (SSK) request.

27. (Currently Amended) An article of manufacture comprising

a storage medium; and

a plurality of programming instructions stored on the storage medium and configured to enable a machine as an intermediary selectively coupling an external network and an internal network to dynamically generate filter rules to facilitate establishing an end to end secure session connection between a first device on the internal network and a second device of the external network to

a machine-accessible media having associated data for an intermediary selectively coupling an external network and an internal network to dynamically generate filter rules to facilitate establishing an end to end secure session connection between a first device on the internal

network and a second device of the external network, wherein the data, when accessed, results in the intermediary performing:

~~receiving receive~~ a secure session establishment request by a second device on the external network to establish a secure communication session with a first device on the internal network;

forwarding the secure session establishment request to the first device;

monitoring the internal network ~~for to detect~~ an approval or disapproval acknowledgement by the first device for the secure session establishment request; and

~~if an approval authentication acknowledgement is monitored, then configuring a first filter rule of the intermediary to allow communication between the first and second devices through the intermediary;~~ ~~if an approval authentication acknowledgement is detected;~~

~~receive network traffic from the second device corresponding to a previous secure communication session established when the second device was previously on the internal network; and~~

~~respond to said network traffic with an error such that the second device attempts to re-establish a secure communication session from the external network.~~

28. (Currently Amended) The article of manufacture of claim 27, wherein the data programming instructions are further configured to enable the machine to includes data, which when accessed, results in the intermediary performing:

~~—determining a presence advertisement for the first device has been received before forwarding the secure session establishment request to the first device.~~

29. (Currently Amended) The article of manufacture of claim 27, wherein the data programming instructions are further configured to enable the machine to includes data, which when accessed, results in the intermediary performing:

~~receiving receive a service request from the second device for the first device, the service request having an associated communication port for performing the service;~~

~~determining determine the service request identifies a service advertised by the first device in a device description document; and~~

~~configuring~~ configure a second filter rule to allow communication between the first device and the second device using the associated communication port.

30. (Currently Amended) The article of manufacture of claim 27, wherein the programming instructions are ~~data further configured to enable the machine to~~ includes data, which when accessed, results in the intermediary performing:

~~providing~~ provide the second device with an indicia for use by the second device in establishing a communication link to the first device.

31. (Currently Amended) The article of manufacture of claim 27, wherein the programming instructions are ~~data further configured to enable the machine to~~ includes data, which when accessed, results in the intermediary performing:

~~retrieving~~ retrieve an Access Control List (ACL) from the first device, the ACL including an identification of devices authorized to establish communication sessions; and
~~determining~~ determine based at least in part on the ACL the second device is authorized to establish the secure communication session with the first device before forwarding the secure session establishment request to the first device.

32. (Currently Amended) An article of manufacture comprising a machine-accessible media having associated data for communicating with a device by way of an intermediary selectively coupling an external network and an internal network, wherein the data, when accessed, results in a machine performing:

a storage medium; and
a plurality of programming instructions stored on the storage medium and configured to program a second device communicating with a first device on an internal network by way of an intermediary selectively coupling an external network and the internal network to receiving, by the second device while on the internal network, a presence advertisement for the first device;
storing, by the second device while on the internal network, a network address associated with the first device;

~~determining~~determine, by the second device while on the internal network, services offered by the first device; and

~~issue~~, by the second device while on the external network, issuing a secure communication initiation request to the first device via the intermediary.

33. (Cancelled)

34. (Currently Amended) The article of claim 32, wherein the programming instructions are further configured to enable the machine as the second device to ~~data further includes data, which when accessed by the machine, results in the machine performing, while on the internal network, requesting~~ request, by the second device while on the internal network, a description of services offered by the first device.

35. (Currently Amended) The article of claim 32, wherein the programming instructions are further configured to enable the machine as the second device to ~~data further includes data, which when accessed by the machine, results in the machine performing, while on the external network, requesting~~ by the second device while on the external network, a description of services offered by the first device.

36.-37. (Cancelled)